

AIR QUALITY PERMIT

Issued To: Rockwall, Inc.
P.O. Box 519
Airway Heights, WA 99001

Permit #3355-01
Administrative Amendment (AA)
Request Received: 9/07/06
Department Decision on AA: 9/26/06
Permit Final: 10/12/06
AFS #777-3355

An air quality permit, with conditions, is hereby granted to Rockwall, Inc. (Rockwall), pursuant to Sections 75-2-204 and 211, Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

Rockwall operates a portable crushing/screening facility at various locations throughout Montana. Permit #3355-01 applies while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program, those areas considered tribal lands, or those areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Addendum #1 applies to the Rockwall facility while operating at any location in or within 10 km of certain PM₁₀ nonattainment areas. A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

B. Current Permit Action

On September 5, 2006, Rockwall submitted an intent to transfer request to the Department. The transfer location was in a PM₁₀ nonattainment area, and the Department notified Rockwall that they would need an addendum to permit #3355-01 with limits applicable to the facility when operating in or near PM₁₀ nonattainment areas. In addition, Rockwall requested to remove two generators from the facility's existing permit, leaving one 1500 kilowatt (kW) generator permitted. Rockwall did not, however, request an increase in hours of operation for the generator once the other two are removed from the permit.

Section II: Limitations and Conditions

A. Operational Limitations and Conditions

1. Rockwall shall not cause or authorize to be discharged into the atmosphere from any Standards of Performance for New Stationary Sources (NSPS) affected crusher, any visible emissions that exhibit an opacity of 15% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR Part 60, Subpart OOO).
2. Rockwall shall not cause or authorize to be discharged into the atmosphere from any other NSPS affected equipment, such as screens or conveyor transfers, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart OOO).
3. Rockwall shall not cause or authorize to be discharged into the atmosphere, from

any non-NSPS affected equipment, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).

4. Water and spray bars shall be available and used, as necessary, to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.752).
5. Rockwall shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
6. Rockwall shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.752).
7. Rockwall shall not operate more than one crusher at any given time and the maximum rated design capacity of the crusher shall not exceed 1000 tons per hour (TPH) (ARM 17.8.749).
8. Total crusher production from the facility shall be limited to 3,285,000 tons during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
9. Rockwall shall not operate more than one screen at any given time and the maximum rated design capacity of the screen shall not exceed 1000 TPH (ARM 17.8.749).
10. Total screen production from the facility shall be limited to 3,285,000 tons during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
11. Rockwall shall not operate more than one diesel generator at any given time and the maximum rated capacity shall not exceed 1500 kW and shall not exceed 3,200 hours during any rolling 12-month time period (ARM 17.8.749).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Rockwall, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).
13. Rockwall shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this portable crushing/screening plant is moved to another location, an Intent to Transfer Form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer Form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.765).
2. Rockwall shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. All records compiled in accordance with this permit shall be maintained by Rockwall as a permanent business record for at least 5 years following the date of the measurement, must be submitted to the Department upon request, and must be available at the plant site for inspection by the Department (ARM 17.8.749).
3. Rockwall shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the most recent emission inventory report and sources identified in Section I.A of the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in units, as required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

4. Rockwall shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start-up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
5. Rockwall shall document, by month, the total crushing production for the facility. By the 25th day of each month, Rockwall shall calculate the crushing production for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.8. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Rockwall shall document, by month, the total screening production for the facility. By the 25th day of each month, Rockwall shall calculate the screening production for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.10. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
7. Rockwall shall document, by month, the total hours of operation for the diesel

generator/engine. By the 25th day of each month, Rockwall shall calculate the total hours of operation for the diesel generator/engine for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.11. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

8. Rockwall shall annually certify that its actual emissions are less than those that would require the source to obtain an Air Quality Operating Permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted with the annual emissions inventory information (ARM 17.8.1204).

Section III: General Conditions

- A. Inspection - Rockwall shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Rockwall fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving Rockwall of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement - Violations of limitations, conditions, and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals - Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection - As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Construction Commencement - Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked.
- H. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay by Rockwall of an annual operation fee may be grounds for revocation of

this permit, as required by that section and rules adopted thereunder by the Board.

- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Rockwall shall comply with the conditions contained in this permit while operating at any location in Montana, except within those areas having a Department approved permitting program.

PERMIT ANALYSIS
Rockwall, Inc.
Permit #3355-01

I. Introduction/Process Description

A. Permitted Equipment

The proposed original location for the facility is Section 6, Township 1 North, Range 27 East, in Yellowstone County, Montana. Permit #3355-01 will apply to the source while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Addendum #1 applies to the Rockwall facility while operating at any location in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas.

B. Process Description

Rockwall proposes to use this crushing/screening plant to crush and sort sand and gravel materials for use in various construction operations. For a typical operational setup, unprocessed materials are loaded into the crushing/screening plant by a hopper and transferred by conveyor to the crusher. Materials are crushed and sent to the screen where materials are separated, with the properly sorted materials conveyed on to stockpile and the other materials conveyed back to the crusher for further processing.

C. Permit History

On September 10, 2004, Rockwall, Inc. (Rockwall), submitted a complete permit application to operate a portable diesel generator/engine (up to 365 kilowatt (kW)), a diesel generator/engine (up to 1500 kW), a diesel generator/engine (up to 1500 kW), a 2004 Eagle Horizontal Impactor crusher (up to 1000 ton per hour (TPH)), a 2004 Eagle (6'x20') 3-deck screen (up to 1000 TPH), and associated equipment. The permit was issued under **Permit #3355-00**.

D. Current Permit Action

On September 5, 2006, Rockwall submitted an intent to transfer request to the Department. The transfer location was in a PM₁₀ nonattainment area, and the Department notified Rockwall that they would need an addendum to permit #3355-01 with limits applicable to the facility when operating in or near PM₁₀ nonattainment areas. In addition, Rockwall requested to remove two generators from the facility's existing permit, leaving one 1500 kilowatt (kW) generator permitted. Rockwall did not, however, request an increase in hours of operation for the generator once the other two are removed from the permit. **Permit #3355-01** will replace Permit #3355-00.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the permit analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 - General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this subchapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Rockwall shall comply with all requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8, Subchapter 2 - Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.220 Ambient Air Quality Standards for Settled Particulate Matter
5. ARM 17.8.223 Ambient Air Quality Standards for PM₁₀

Rockwall must comply with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 - Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Rockwall shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Processes. This rule requires that no person shall cause or allow to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standards of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, NSPS, shall comply with the standards and provisions of 40 CFR Part 60.

In order for a crushing/screening plant to be subject to NSPS requirements, two specific criteria must be met. First, the crushing/screening plant must meet the definition of an affected facility, and second, the equipment in question must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by Rockwall, the crushing/screening equipment to be used under Permit #3355-01 is subject to New Source Performance Standards (NSPS) requirements (40 CFR Part 60, Subpart A General Provisions, and Subpart OOO, Non-Metallic Mineral Processing Plants).

D. ARM 17.8, Subchapter 5 - Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that Rockwall submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Rockwall was not

required to submit an application fee for the current permit action because it is considered an administrative action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. This operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

E. ARM 17.8, Subchapter 7 - Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits-When Required. This rule requires a facility to obtain an air quality permit or permit alteration to construct, alter, or use any asphalt plant, crusher, or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. Rockwall has the PTE to emit greater than 15 tons per year of total particulate matter (PM), PM₁₀, oxides of nitrogen (NO_x), and carbon monoxide (CO); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits-General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit Program.
4. ARM 17.8.745 Montana Air Quality Permit-Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that are not subject to the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units-Permit Application Requirements. This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Rockwall was not required to submit a permit application for the current permit action because it is considered an administrative action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Rockwall was not required to submit a public notice for the current permit action because it is considered an administrative action.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit

must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section IV of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Rockwall of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of Rockwall, or for violations of any requirement of the Clean Air Act of Montana (Act), rules adopted under the Clean Air Act of Montana, FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Act, and the facility complies with other applicable rules. (2) This rule states that an

air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

- F. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
 2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications-- Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since it is not a listed source and the facility's potential to emit is less than 250 tons per year (excluding fugitive emissions) of any air pollutant.

- G. ARM 17.8, Subchapter 12 - Operating Permit Program Applicability, including, but not limited to:
1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or a lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
 2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3355-01 for the Rockwall facility, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year of any one HAP and less than 25 tons/year of all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is not subject to any current National Emission Standards of Hazardous Air Pollutants (NESHAP) standards.
 - e. This facility is subject to current NSPS standards (40 CFR 60, Subpart A General Provisions, and Subpart OOO, Non-Metallic Mineral Processing Plants OOO).
 - f. This source is not a Title IV affected source or a solid waste combustion

unit.

- g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Rockwall would be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Rockwall will be required to obtain a Title V Operating Permit.

- h. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations, which limit that source's PTE.
- i. In applying for an exemption under this section, the owner or operator of the source shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.
- ii. Any source that obtains a federally enforceable limit on PTE shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

The Department has determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required by ARM 17.8.1204(3) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

III. Emission Inventory

Source	Tons/Year					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
One crusher (up to 1000 TPH)	5.26	2.37				
One screen (up to 1000 TPH)	9.64	3.24				
Material Transfer (6 transfers)	3.68	1.23				
Pile Forming (4 piles)	16.82	7.88				
Bulk Loading (2 loads)	3.85	1.31				
One Diesel Generator (up to 1500 KW)	2.25	2.25	99.78	2.29	17.70	26.04
Haul Roads	10.15	2.88				
Total	51.65	21.16	99.78	2.29	17.70	26.04

The diesel generator is limited to no more than 3200 hours to keep the facility from being a major source.

Crusher (up to 1000 ton/hour capacity)

Maximum Process Rate: 1000 ton/hr
Hours of operation: 8760 hr/yr

PM Emissions:

Emission Factor:	0.0012 lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.0012 lb/ton * 1000 tons/hr =		1.20 lb/hr
Daily Calculations:	1.20 lb/hr * 24 hr/day =		28.80 lb/day
Annual Calculations:	1.20 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		5.26 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.00054 lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.00054 lb/ton * 1000 tons/hr =		0.54 lb/hr
Daily Calculations:	0.54 lb/hr * 24 hr/day =		12.96 lb/day
Annual Calculations:	0.54 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		2.37 ton/yr

Screens (up to 1000 ton/hour combined capacity)

Maximum Process Rate:	1000 ton/hr
Hours of operation:	8760 hr/yr

PM Emissions:

Emission Factor:	0.0022 lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.0022 lb/ton * 1000 ton/hr =		2.20 lb/hr
Daily Calculations:	2.20 lb/hr * 24 hr/day =		52.80 lb/day
Annual Calculations:	2.20 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		9.64 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.00074 lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.00074 lb/ton * 1000 ton/hr =		0.74 lb/hr
Daily Calculations:	0.74 lb/hr * 24 hr/day =		17.76 lb/day
Annual Calculations:	0.74 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		3.24 ton/yr

Diesel Generator

Generator Size =	up to 1500 kW
1kW =	1.341 hp
1000 kW * 1.341 =	2011 hp

Hours of operation:	3200 hr/yr – or – 8.77 hr/day
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PM Emissions

Emission Factor:	0.0007 lb/hp-hr	(AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	2011 hp * 0.0007 lb/hp-hr =		1.41 lb/hr
Daily Calculations:	2011 hp * 0.0007 lb/hp-hr * 8.77hr/day =		12.35 lb/day
Annual Calculation:	2011 hp * 0.0007 * 3200hr/yr * 0.0005 lb/ton =		2.25 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.0007 lb/hp-hr	(AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	2011 hp * 0.0007 lb/hp-hr =		1.41 lb/hr
Daily Calculations:	2011 hp * 0.0007 lb/hp-hr * 8.77hr/day =		12.35 lb/day
Annual Calculation:	2011 hp * 0.0007 * 3200 hr/yr * 0.0005 lb/ton =		2.25 ton/yr

NOx Emissions:

Emission Factor:	0.031 lb/hp-hr	(AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	2011 hp * 0.031 lb/hp-hr =		62.34 lb/hr
Daily Calculations:	2011 hp * 0.031 lb/hp-hr * 8.77 hr/day =		546.73 lb/day
Annual Calculation:	2011 hp * 0.031 * 3200 hr/yr * 0.0005 lb/ton =		99.78 ton/yr

VOC Emissions:

Emission Factor:	0.00071 lb/hp-hr	(AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	2011 hp * 0.00071 lb/hp-hr =		1.43 lb/hr
Daily Calculations:	2011 hp * 0.00071 lb/hp-hr * 8.77 hr/day =		12.54 lb/day
Annual Calculation:	2011 hp * 0.00071 * 3200 hr/yr * 0.0005 lb/ton =		2.29 ton/yr

CO Emissions:

Emission Factor:	0.0055 lb/hp-hr	(AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	2011 hp * 0.0055 lb/hp-hr =		11.06 lb/hr
Daily Calculations:	2011 hp * 0.0055 lb/hp-hr * 8.77hr/day =		97.00 lb/day
Annual Calculation:	2011 hp * 0.0055 * 3200 hr/yr * 0.0005 lb/ton =		17.70 ton/yr

SOx Emissions:

Emission Factor:	0.00809 lb/hp-hr	(AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	2011 hp * 0.00809 lb/hp-hr =		16.27 lb/hr
Daily Calculations:	2011 hp * 0.00809 lb/hp-hr * 8.77 hr/day =		142.68 lb/day
Annual Calculation:	2011 hp * 0.00809 * 3200hr/yr * 0.0005 lb/ton =		26.04 ton/yr

Material Transfer

Process Rate:	400 ton/hr
Number of Transfers	15 transfers
Hours of operation:	8760 hr/yr

PM Emissions:

Emission Factor:	0.00014 lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.00014 lb/ton * 400 ton/hr * 15 transfers=		0.84 lb/hr
Daily Calculations:	0.84 lb/hr * 24 hr/day =		20.16 lb/day
Annual Calculations:	0.84 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		3.68 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.000046 lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.000046 lb/ton * 400 tons/hr * 15 transfers=		0.28 lb/hr
Daily Calculations:	0.28 lb/hr * 24 hr/day =		6.72 lb/day
Annual Calculations:	0.28 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		1.23 ton/yr

Pile Forming

Process Rate:	400 ton/hr
Number of Piles	3 piles
Hours of operation:	8760 hr/yr

PM Emissions:

Emission Factor:	0.0032 lb/ton	(AP-42, Section 13.2.4, 1/95)	
Hourly Calculations:	0.0032 lb/ton * 400 ton/hr * 3 piles=		3.84 lb/hr
Daily Calculations:	3.84 lb/hr * 24 hr/day =		92.16 lb/day
Annual Calculations:	3.84 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		16.82 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.0015lb/ton	(AP-42, Section 13.2.4, 1/95)	
Hourly Calculations:	0.0015 lb/ton * 400 ton/hr * 3 piles =		1.80 lb/hr
Daily Calculations:	1.80 lb/hr * 24 hr/day =		43.20 lb/day
Annual Calculations:	1.80 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		7.88 ton/yr

Bulk Loading

Process Rate:	400 ton/hr
Number of Loads	4 load
Hours of operation:	8760 hr/yr

PM Emissions:

Emission Factor:	0.0022lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.0022 lb/ton * 400 ton/hr =		.88 lb/hr
Daily Calculations:	0.88 lb/hr * 24 hr/day =		21.12 lb/day
Annual Calculations:	0.88 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		3.85 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.00074 lb/ton	(AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.00074 lb/ton * 400 ton/hr =		0.30 lb/hr
Daily Calculations:	0.30 lb/hr * 24 hr/day =		7.20 lb/day
Annual Calculations:	0.30 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		1.31 ton/yr

Haul Roads

Vehicle miles traveled:	4 VMT/day	{Estimated}
Assumption:	Rated Load Capacity < 50 tons	
Hours of Operation:	8760 hr/yr	
	24 hr/day	

TSP Emissions:

Emission Factor:	13.90 lb/VMT	
Calculations:	4.0 VMT/day * 13.90 lb/VMT =	55.60 lb/day
	55.60 lb/day * 365 day/yr * 0.0005 ton/lb =	10.15 ton/yr

PM-10 Emissions:

Emission Factor:	3.95 lb/VMT	
Calculations:	4.0 VMT/day * 3.95 lb/VMT =	15.80 lb/day
	15.80 lb/day * 365 day/yr * 0.0005 ton/lb =	2.88 ton/yr

IV. BACT Determination

A BACT determination is required for any new or altered source. Rockwall shall install on the new or altered source the maximum air pollution control capability that is technologically practicable and economically feasible, except that BACT shall be used. A BACT analysis was not required for the current permit action because it considered an administrative action.

V. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM₁₀. Due to exceedences of the national standards for PM₁₀, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM₁₀. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM₁₀ State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies identified these sources to be the major contributors to PM₁₀ emissions.

VI. Ambient Air Quality Impact Analysis

Permit #3355-01 will cover the operation while operating at any location within Montana, excluding those counties that have a Department approved permitting program, those areas considered tribal lands, or those areas in or within 10 km of certain PM₁₀ nonattainment areas. In the view of the Department, the amount of controlled emissions generated by this facility will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minor and short-lived.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, Montana Code Annotated (MCA), the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

An environmental assessment is not required for the current permit action because it is considered an administrative action.

Analysis Prepared By: Julie Merkel

Date: 09/18/06

Addendum #1
Rockwall Construction Company, Inc.
Permit #3355-01

An addendum to air quality Permit #3355-01 is hereby granted to Rockwall, Inc. (Rockwall), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.765, as amended, for the following:

I. Permitted Equipment

Rockwall, operates a portable crushing/screening facility consisting of one crusher (up to 1000 tons per hour (TPH) capacity), one screen (up to 1000 TPH capacity), a diesel generator (up to 1500 kilowatts (kW)), and associated equipment.

II. Seasonal and Site Restrictions

Addendum #1 applies to the Rockwall facility while operating at any location in or within 10 km of certain PM₁₀ nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

- A. During the winter season (October 1– March 31), the only location(s) in or within 10 km of a particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment area where Rockwall may operate is:
- Section 23, Township 30, Range 21 ; and
 - Any other site that may be approved, in writing, by the Department of Environmental Quality (Department).
- B. During the summer season (April 1– September 30), Rockwall may operate at any location in or within 10 km of the Libby, Thompson Falls, Kalispell, Whitefish, Columbia Falls, and Butte PM₁₀ nonattainment areas.
- C. Rockwall shall comply with the limitations and conditions contained in Addendum #1 to Permit #3355-01 while operating in or within 10 km of any of the previously listed PM₁₀ nonattainment areas. Addendum #1 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum #1 at any time based on local conditions of any future site. These conditions may include, but are not limited to, local terrain, meteorological conditions, proximity to residences or other businesses, etc.

III. Conditions and Limitations

- A. Operational Conditions and Limitations – **Winter Season (October 1 – March 31)**
1. Water spray bars shall be available and operated, as necessary, on the crusher, screen, and all material transfer points to maintain compliance with the opacity limitations in Sections, III.A.2 and III.A.3 (ARM 17.8.749).
 2. All visible emissions from the crushing/screening plant may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
 3. Rockwall shall not cause or authorize to be discharged into the atmosphere from any other equipment, such as screens or transfer points, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

4. Rockwall shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
5. Rockwall shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the limitation in Section III.A.4 (ARM 17.8.749).
6. The crusher production is limited to 8,770 tons during any rolling 24-hour time period (ARM 17.8.749).
7. The screen production is limited to 8,770 tons during any rolling 24-hour time period (ARM 17.8.749).
8. The hours of operation of the 1500 kW diesel generator shall not exceed 8.77 hours of operation during any rolling 24-hour time period (ARM 17.8.749).

B. Operational Conditions and Limitations – Summer Season (April 1 – September 30)

1. Water spray bars shall be available and operated, as necessary on the crushers, screens, and all material transfer points to maintain compliance with the opacity limitations in Sections III.B.2 and III.B.3 (ARM 17.8.749).
2. All visible emissions from the crushing/screening plant may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
3. Rockwall shall not cause or authorize to be discharged into the atmosphere from any other equipment, such as screens or transfer points, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
4. Rockwall shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
5. Rockwall shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the limitation in Section III.B.4 (ARM 17.8.749).
6. Hours of operation of the 1500 kW diesel generator shall not exceed 8.77 hours of operation during any rolling 24-hour time period (ARM 17.8.749).

C. Operational Reporting Requirements

1. Rockwall shall provide the Department with written notification of job completion within 10 working days of job completion (ARM 17.8.749).
2. Rockwall shall provide the Department with written notice of relocation of the permitted equipment within 15 working days of physical transfer of equipment (ARM 17.8.765).

3. Production information for the sites covered by this addendum must be submitted to the Department with the annual emissions inventory request or within 30 days of completion of the project. The information must include the following (ARM 17.8.749):
 - a. Tons of gravel crushed by each crusher at each site
 - b. Tons of material screened by each screen at each site
 - c. Tons of bulk material loaded at each site
 - d. Daily hours of operation at each site
 - e. Gallons of diesel used by the generator at each site
 - f. Fugitive dust information consisting of all plant vehicles, including the following for each vehicle type:
 - i. Number of vehicles
 - ii. Vehicle type
 - iii. Vehicle weight, loaded
 - iv. Vehicle weight, unloaded
 - v. Number of tires on vehicle
 - vi. Average trip length
 - vii. Number of trips per day per vehicle
 - viii. Average vehicle speed
 - ix. Area of activity
 - x. Vehicle fuel usage (gasoline and diesel) annual total
 - g. Fugitive dust control for haul roads and general plant area:
 - i. Hours of operation of water trucks; and
 - ii. Application schedule for chemical dust suppressant, if applicable.
4. Rockwall shall document, by day, the combined total crushing production during the winter season. Rockwall shall sum the combined total crushing production during the previous 24 hours to verify compliance with the limitation in Section III.A.6. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emission inventory (ARM 17.8.749).
5. Rockwall shall document, by day, the combined total screening production during the winter season. Rockwall shall sum the combined total screening production during the previous 24 hours to verify compliance with the limitation in Section III.A.7. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Rockwall shall document, by day, the hours of operation of the diesel generator during the winter months. Rockwall shall total the hours of operation of the diesel generator during the previous 24 hours to verify compliance with the limitation in Section III.A.8. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emissions inventory (ARM 17.8.749).

7. Rockwall shall document, by day, the hours of operation of the diesel generator during the winter season. Rockwall shall total the hours of operation of the diesel generator during the previous 24 hours to verify compliance with the limitation in Section III.B.6e. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emissions inventory (ARM 17.8.749).

Addendum #1 Analysis
Rockwall Construction Company, Inc.
Permit #3355-01

I. Permitted Equipment

Rockwall Construction Company, Inc. (Rockwall), operates a portable crushing/screening facility consisting of one crusher (up to 1000 tons per hour (TPH) capacity), one screen (up to 1000 TPH capacity), a diesel generator (up to 1500 kilowatts (kW)), and associated equipment. Addendum #1 applies to the Rockwall facility while operating at any location in or within 10 km of certain PM₁₀ nonattainment areas.

II. Source Description

Rockwall uses the crushing/screening plant to crush and sort sand and gravel. For a typical operational setup, the raw materials are loaded into a hopper and conveyed to the crushing/screening plant. Materials are crushed by the crusher, screened and sorted, and conveyed to stockpile for sale and use, generally for construction operations.

III. Applicable Rules and Regulations

The following are partial quotations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

ARM 17.8, Subchapter 7 - Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

- A. ARM 17.8.749 Conditions for Issuance of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
- B. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.
- C. ARM 17.8.765 Transfer of Permit. An air quality permit may be transferred from one location to another if:
 - 1. Written notice of Intent to Transfer location and proof of public notice are sent to the Department;
 - 2. The source will operate in the new location for a period of less than 1 year; and
 - 3. The source will not have any significant impact on any nonattainment area or any Class I area.

Rockwall must submit proof of compliance with the transfer and public notice requirements when

they transfer to the location(s) covered by this addendum, and will only be allowed to stay in the new location for a period of less than 1 year. Also, the conditions and limitations of Addendum 1 to Permit #3355-01 will prevent Rockwall from having a significant impact on certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas.

IV. Emission Inventory (Addendum 1 Permit #3355-01)

Source	Lbs/Day					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
One crusher (up to 1000 TPH)	28.80	12.96				
One screen (up to 1000 TPH)	52.80	17.76				
Material Transfer	20.16	6.72				
Pile Forming	92.16	43.20				
Bulk Loading	21.12	7.20				
One Diesel Generator (up to 1500 KW)	12.35	12.35	546.73	12.54	97.00	142.68
Haul Roads	55.60	15.80				
Total	282.99	115.99	546.73	12.54	97.00	142.68

Emission Inventory for Summer Season (See EI in Permit Analysis)

Source	Lbs/Day					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
One crusher (up to 1000 TPH)	16.44	7.40				
One screen (up to 1000 TPH)	30.14	10.14				
Material Transfer	4.60	1.51				
Pile Forming	70.14	32.88				
Bulk Loading	12.06	4.11				
One Diesel Generator (up to 1500 KW)	12.35	12.35	546.73	12.54	97.00	142.68
Haul Roads	41.70	11.85				
Total	187.43	80.24	546.73	12.54	97.00	142.68

Emission Inventory for Winter Season

Crusher (up to 1000 ton/hour capacity)

Maximum Process Rate: 1000 ton/hr
Hours of operation: 5000 hr/yr

PM Emissions:

Emission Factor: 0.0012 lb/ton (AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations: 0.0012 lb/ton * 1000 tons/hr = 1.20 lb/hr
Daily Calculations: 1.20 lb/hr * 13.7 hr/day = 16.44 lb/day
Annual Calculations: 1.20 lb/hr * 5000 hr/yr * 0.0005 ton/lb = 3.00 ton/yr

PM₁₀ Emissions:

Emission Factor: 0.00054 lb/ton (AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations: 0.00054 lb/ton * 1000 tons/hr = 0.54 lb/hr
Daily Calculations: 0.54 lb/hr * 13.7 hr/day = 7.40 lb/day
Annual Calculations: 0.54 lb/hr * 5000 hr/yr * 0.0005 ton/lb = 1.35 ton/yr

Screens (up to 1000 ton/hour combined capacity)

Maximum Process Rate: 1000 ton/hr
Hours of operation: 5000 hr/yr

PM Emissions:

Emission Factor: 0.0022 lb/ton (AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations: 0.0022 lb/ton * 1000 tons/hr = 2.20 lb/hr
Daily Calculations: 2.20 lb/hr * 13.7 hr/day = 30.14 lb/day
Annual Calculations: 2.20 lb/hr * 5000 hr/yr * 0.0005 ton/lb = 5.50 ton/yr

PM₁₀ Emissions:

Emission Factor: 0.00074 lb/ton (AP-42, Table 11.19.2-2, 8/04)

Hourly Calculations:	$0.00074 \text{ lb/ton} * 1000 \text{ ton/hr} =$	0.74 lb/hr
Daily Calculations:	$0.74 \text{ lb/hr} * 13.7 \text{ hr/day} =$	10.14 lb/day
Annual Calculations:	$0.74 \text{ lb/hr} * 5000 \text{ hr/yr} * 0.0005 \text{ ton/lb} =$	1.85 ton/yr

Diesel Generator

Generator Size =	up to 1500 kW
1kW =	1.341 hp
1000 kW * 1.341 =	2011 hp

Hours of operation: 3200 hr/yr -- or -- 8.77 hr/day

PM Emissions

Emission Factor:	0.0007 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	$2011 \text{ hp} * 0.0007 \text{ lb/hp-hr} =$	1.41 lb/hr
Daily Calculations:	$2011 \text{ hp} * 0.0007 \text{ lb/hp-hr} * 8.77 \text{ hr/day} =$	12.35 lb/day
Annual Calculation:	$2011 \text{ hp} * 0.0007 * 3200 \text{ hr/yr} * 0.0005 \text{ lb/ton} =$	2.25 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.0007 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	$2011 \text{ hp} * 0.0007 \text{ lb/hp-hr} =$	1.41 lb/hr
Daily Calculations:	$2011 \text{ hp} * 0.0007 \text{ lb/hp-hr} * 8.77 \text{ hr/day} =$	12.35 lb/day
Annual Calculation:	$2011 \text{ hp} * 0.0007 * 3200 \text{ hr/yr} * 0.0005 \text{ lb/ton} =$	2.25 ton/yr

NOx Emissions:

Emission Factor:	0.031 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	$2011 \text{ hp} * 0.031 \text{ lb/hp-hr} =$	62.34 lb/hr
Daily Calculations:	$2011 \text{ hp} * 0.031 \text{ lb/hp-hr} * 8.77 \text{ hr/day} =$	546.73 lb/day
Annual Calculation:	$2011 \text{ hp} * 0.031 * 3200 \text{ hr/yr} * 0.0005 \text{ lb/ton} =$	99.78 ton/yr

VOC Emissions:

Emission Factor:	0.00071 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	$2011 \text{ hp} * 0.00071 \text{ lb/hp-hr} =$	1.43 lb/hr
Daily Calculations:	$2011 \text{ hp} * 0.00071 \text{ lb/hp-hr} * 8.77 \text{ hr/day} =$	12.54 lb/day
Annual Calculation:	$2011 \text{ hp} * 0.00071 * 3200 \text{ hr/yr} * 0.0005 \text{ lb/ton} =$	2.29 ton/yr

CO Emissions:

Emission Factor:	0.0055 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	$2011 \text{ hp} * 0.0055 \text{ lb/hp-hr} =$	11.06 lb/hr
Daily Calculations:	$2011 \text{ hp} * 0.0055 \text{ lb/hp-hr} * 8.77 \text{ hr/day} =$	97.00 lb/day
Annual Calculation:	$2011 \text{ hp} * 0.0055 * 3200 \text{ hr/yr} * 0.0005 \text{ lb/ton} =$	17.70 ton/yr

SOx Emissions:

Emission Factor:	0.00809 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	$2011 \text{ hp} * 0.00809 \text{ lb/hp-hr} =$	16.27 lb/hr
Daily Calculations:	$2011 \text{ hp} * 0.00809 \text{ lb/hp-hr} * 8.77 \text{ hr/day} =$	142.68 lb/day
Annual Calculation:	$2011 \text{ hp} * 0.00809 * 3200 \text{ hr/yr} * 0.0005 \text{ lb/ton} =$	26.04 ton/yr

Material Transfer

Process Rate:	400 ton/hr
Number of Transfers	6 transfers
Hours of operation:	5000 hr/yr

PM Emissions:

Emission Factor:	0.00014 lb/ton (AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	$0.00014 \text{ lb/ton} * 400 \text{ ton/hr} * 6 \text{ transfers} =$	0.34 lb/hr
Daily Calculations:	$0.34 \text{ lb/hr} * 13.7 \text{ hr/day} =$	4.60 lb/day
Annual Calculations:	$0.34 \text{ lb/hr} * 5000 \text{ hr/yr} * 0.0005 \text{ ton/lb} =$	0.84 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.000046 lb/ton (AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	$0.000046 \text{ lb/ton} * 400 \text{ tons/hr} * 6 \text{ transfers} =$	0.11 lb/hr
Daily Calculations:	$0.11 \text{ lb/hr} * 13.7 \text{ hr/day} =$	1.51 lb/day
Annual Calculations:	$0.11 \text{ lb/hr} * 5000 \text{ hr/yr} * 0.0005 \text{ ton/lb} =$	0.28 ton/yr

Pile Forming

Process Rate:	400 ton/hr
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Number of Piles 3 piles
Hours of operation: 5000 hr/yr

PM Emissions:

Emission Factor: 0.0032 lb/ton (AP-42, Section 13.2.4, 1/95)
Hourly Calculations: 0.0032 lb/ton * 400 ton/hr * 4 piles = 5.12 lb/hr
Daily Calculations: 3.84 lb/hr * 13.7 hr/day = 70.14 lb/day
Annual Calculations: 3.84 lb/hr * 5000 hr/yr * 0.0005 ton/lb = 12.80 ton/yr

PM₁₀ Emissions:

Emission Factor: 0.0015 lb/ton (AP-42, Section 13.2.4, 1/95)
Hourly Calculations: 0.0015 lb/ton * 400 ton/hr * 4 piles = 2.40 lb/hr
Daily Calculations: 1.80 lb/hr * 13.7 hr/day = 32.88 lb/day
Annual Calculations: 1.80 lb/hr * 5000 hr/yr * 0.0005 ton/lb = 6.00 ton/yr

Bulk Loading

Process Rate: 400 ton/hr
Number of Loads 4 load
Hours of operation: 5000 hr/yr

PM Emissions:

Emission Factor: 0.0022 lb/ton (AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations: 0.0022 lb/ton * 400 ton/hr = .88 lb/hr
Daily Calculations: 0.88 lb/hr * 13.7 hr/day = 12.06 lb/day
Annual Calculations: 0.88 lb/hr * 5000 hr/yr * 0.0005 ton/lb = 2.20 ton/yr

PM₁₀ Emissions:

Emission Factor: 0.00074 lb/ton (AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations: 0.00074 lb/ton * 400 ton/hr = 0.30 lb/hr
Daily Calculations: 0.30 lb/hr * 13.7 hr/day = 4.11 lb/day
Annual Calculations: 0.30 lb/hr * 5000 hr/yr * 0.0005 ton/lb = 0.75 ton/yr

Haul Roads

Vehicle miles traveled: 3 VMT/day {Estimated}
Assumption: Rated Load Capacity < 50 tons
Hours of Operation: 5000 hr/yr
13.7 hr/day

TSP Emissions:

Emission Factor: 13.90 lb/VMT
Calculations: 3.0 VMT/day * 13.90 lb/VMT = 41.70 lb/day
41.70 lb/day * 365 day/yr * 0.0005 ton/lb = 7.60 ton/yr

PM-10 Emissions:

Emission Factor: 3.95 lb/VMT
Calculations: 4.0 VMT/day * 3.95 lb/VMT = 11.85 lb/day
11.85 lb/day * 365 day/yr * 0.0005 ton/lb = 2.16 ton/yr

V. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM₁₀. Due to exceedences of the national standards for PM₁₀, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM₁₀. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM₁₀ State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies identified these sources to be the major contributors to PM₁₀ emissions.

VI. Ambient Air Quality Impact Analysis

Addendum #1 will cover the operation while operating at any location within Montana, excluding those counties that have a Department approved permitting program, those areas considered tribal lands, or those areas in or within 10 km of certain PM₁₀ nonattainment areas. In the view of the Department, the amount of controlled emissions generated by this facility will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minor and short-lived.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, Montana Code Annotated (MCA), the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

Analysis Prepared By: Julie Merkel

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